UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,785	03/08/2004	Leslie R. Fine	200401144-1	4138

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EXAMINER
JARRETT, SCOTT L

ART UNIT	PAPER NUMBER
3624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/797,785	FINE ET AL.
	Examiner	Art Unit	
	SCOTT L. JARRETT	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2009*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-24* is/are pending in the application.
      4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1 and 3-24* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
      Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
      Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
      a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
      * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
      Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
      Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

37 CFR § 1.105 - Requirement for Information

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

Examiner's research appears to indicate that the Assignee and/or Applicant may have implemented and deployed a system and method for finance/sales forecasting/aggregation using information markets/mechanisms as early as 1996. For example:

Plott et al., Information Aggregation Mechanisms: Concept, Design, and Implementation For A Sales Forecasting Problem (2002) clearly teaches such a system/method.

- Table 1 - see the plurality of markets run from October 1996 - May 1999

- "A joint research project between Caltech and Hewlett-Packard Laboratories was initiated in 1996 to investigate the possibilities of implementing an Information Aggregation Mechanisms", Paragraph 2, Page 3

Plott, Markets as Information Gathering Tools (2000)

- Figure 7 (same figure as above article)

- Section 3, Pages 12-13

In response to this requirement, please provide the citation and a copy of each publication which any of the applicants authored or co-authored and which describe the

disclosed subject matter of sales forecasting or information aggregation or information markets.

In response to this requirement, please provide the citation and copy of each publication that is a source used for the description of the prior art in the disclosure. For each publication, please provide a concise explanation of that publication's contribution to the description of the prior art.

In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to develop the disclosed subject matter that describes the applicant's invention, particularly as to developing (information markets, finance forecasting, information aggregation). For each publication, please provide a concise explanation of the reliance placed on that publication in the development of the disclosed subject matter.

In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to draft the claimed subject matter. For each publication, please provide a concise explanation of the reliance placed on that publication in distinguishing the claimed subject matter from the prior art.

In response to this requirement, please provide the names of any products or services that have incorporated the claimed subject matter.

In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

The fee and certification requirements of 37 C.F.R. § 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 C.F.R. § 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 C.F.R. § 1.105 are subject to the fee and certification requirements of 37 C.F.R. § 1.97.

The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.

This requirement is an attachment of the enclosed Office action. A complete response to the enclosed Office action must include a complete response to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action, which is 3 months.

DETAILED ACTION

1.   This **Non-Final** Office Action is in response to Applicant's amendment filed

March 31, 2009. Applicant's amendment amended claims 1, 3-9, and 22, canceled

claim 2 and added new claim 24. Currently Claims 1 and 3-24 are pending.

This Office Action has been made non-final in order to address the examiners

questioned raised in the attached 37 C.F.R. § 1.105 Requirement for Information

Request - specifically to establish Applicant's and/or assignee's previous

systems/methods of finance forecasting or the use of information markets.

Response to Amendment

2.   The 35 U.S.C. 101 rejection of Claims 1-9 and 22-23 is withdrawn in response to

Applicant's amendments to the claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.

Response to Arguments

3.   Applicant's arguments filed March 31, 2009 have been fully considered but they

are not persuasive. Specifically Applicant's argue that the prior art of record fails to

teach or suggest requesting (querying) participants to input a probability for a specified

outcome (performing a query process with the probability bins as assets; Paragraph 1,

Page 11).

In response to Applicant's arguments that the prior art of record, specifically

Kaplan, U.S. Patent No. 7,155,510 and Sarin, A Approach For Long Term Forecasting

with an Application to Solar Energy (1979) fail to teach or suggestion requesting

participants to input a probability for a specified outcome the examiner respectfully

disagrees.

Sarin teaches performing a query process (soliciting experts/participants) with

the probability bins as assets wherein each of the probability bins/assets corresponds to

a probability associates with an expected outcome (e.g. experts are solicited to provide

probabilities/probability distributions/likelihoods for each of a set of scenarios/expected

outcomes/factors; Abstract; Last Two sentences, Paragraph 1, Page 543; First two

sentences, Last Paragraph, "The conditional probability distributions for s for various

scenarios are also needed", Page 544; Paragraph 3, Page 546; Section 5 – Scenario

Probabilities, Pages 546-548; Tables 2, 3).

Further, as noted in the previous office action it is old and well know to provide

probabilities forecasts for various possible/expected outcomes, e.g. probability bins,

buckets, classes, ranges of expected outcomes, rain/no rain). Support for this well

known fact, as discussed in the previous office action can be found in at least the

following references.

- Grier, Verification of Forecasts Expressed in Terms of Probability (1950);

- Wiper, Combining experts' opinions' using a normal-Wishart model (1995)

- Siekmann et al., Information Fusion in the Context of Stock Index Prediction
  (2001)

- Plott et al., Information Aggregation Mechanisms: Concept, Design, and

  Implementation For A Sales Forecasting Problem (2002): Paragraphs 3-4,

  Page 6; Paragraphs 2-3, Page 7

- Plott, Markets as Information Gathering Tools (2000): Section 3, Pages 12-13;

"Since these prices must range from 0-100, they can be interpreted as probabilities.

Thus, the price of 9 in the market SEP-LOW-1500 can be interpreted as the "market

belief" that the probability is 0.09 that the September sales will be in the range of 0-

1500. With the interpretation of prices as probabilities, the model state is 1901-2100

with a probability of 0.22..." Paragraph 1, Page 13).

It is noted that the applicant did not challenge the officially cited facts in the

previous office actions therefore those statements as presented are herein after prior

art. Specifically it has been established that it was old and well known in the art at the

time of the invention:

- to providing probabilities associated with a specified outcome;

- that exponential factoring is an old and well know mathematical/statistical

technique, method and/or approach wherein common exponential factoring in forecasts

include exponential weighted averaging, exponential smoothing factors, MACD

(exponential) and the like.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 3-6, 8-14 and 17-23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kaplan, U.S. Patent No. 7,155,510 in view of Sarin, Rakesh K. An

Approach for Long Term Forecasting with an Application to Solar Electric Energy

(1979).

Regarding Claims 1, 10, 19 and 22 Kaplan teaches a method and system for

forecasting comprising:

- creating an (information, decision, prediction, matching, betting, trading,

wagering, speculative, virtual, idea, event derivatives, etc.) market to determine the

participant characteristic (Column 6, Lines 5-12, 40-68; Column 7, Lines 1-25; Column

8, Lines 9-15, 43-60; Column 10, Lines 12-34; Column 11, Lines 22-26);

- determining at least one participant characteristic of a participant based on the

participants behavior within the market (e.g. WPSE; Column 4, Lines 49-52; Column 5,

Lines 32-40; Column 6, Lines 64-68; Column 7, Lines 1-26; Column 8, Lines 9-14);

- defining predictions each corresponding to a probability associated with an

expected outcome (Column 6, Lines 40-55);

- performing a query process with the probability as assets (information,

securities, financial instruments, etc.; Column 4, Lines 30-68; Column 5, Lines 1-8;

Column 6, Lines 5-24; Column 9, Lines 5-12);

- aggregating a result of the query process with weighting for the participant

characteristic (WPSE, CPI; Column 6, Lines 5-12, 40-68; Column 7, Lines 1-25; Column

8, Lines 9-15, 43-60; Column 10, Lines 12-34; Column 11, Lines 22-26).

While providing probabilities forecasts for various possible/expected outcomes,

e.g. probability bins, buckets, classes, ranges of expected outcomes, rain/no rain) is old

and very well known (see for example: Plott et al., Information Aggregation

Mechanisms: Concept, Design, and Implementation For A Sales Forecasting Problem

(2002): Paragraphs 3-4, Page 6; Paragraphs 2-3, Page 7; Plott, Markets as Information

Gathering Tools (2000): Section 3, Pages 12-13; "Since these prices must range from

0-100, they can be interpreted as probabilities. Thus, the price of 9 in the market SEP-

LOW-1500 can be interpreted as the "market belief" that the probability is 0.09 that the

September sales will be in the range of 0-1500. With the interpretation of prices as

probabilities, the model state is 1901-2100 with a probability of 0.22..." Paragraph 1,

Page 13).

) and while Kaplan teaches defining a plurality of expected outcomes and

associating probability with each Kaplan does not expressly use the phrase "probability

bins" as claimed (see range of potential definitions recited in Applications specification:

Paragraphs 55, 58; Figure 6).

Sarin teaches defining probability bins each corresponding to a probability associated with an expected outcome (scenarios, probability distributions; Abstract; Paragraphs 1-2, Page 546; Paragraph 1, Page 547; Last Paragraph, Page 550) in an analogous art of forecasting for the purpose of predicting/forecasting alternative projections/scenarios (Paragraph 2, Page 544; Paragraph 1, Page 553).

Sarin further teaches a system and method for forecasting comprising: performing a query process with the probability bins and aggregating a result of the query process with weighting for individual participant characteristic(s) (Section 8, Pages 551-552).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for forecasting as taught by Kaplan would have benefited from defining probability bins having an associated probability in view of the teachings of Sarin; the resultant system/method enabling users to forecast alternative scenarios/outcomes (Sarin: Paragraph 2, Page 544).

Further since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claims 9, 11, 20 and 23 Kaplan teaches method and system further comprising conducting an market (information, decision, prediction, matching, betting, trading, wagering, speculative, virtual, idea, event derivatives, etc.) to determine the participant characteristic (Column 6, Lines 5-12, 40-68; Column 7, Lines 1-25; Column 8, Lines 9-15, 43-60; Column 10, Lines 12-34; Column 11, Lines 22-26).

Regarding Claims 3-4, 13, 18 and 21 Kaplan teaches a forecasting system and method further comprising determining the mean, average and other common statistical/mathematical parameters associated with the forecasts/probabilities associated with the expected outcomes (Column 56, Lines 4—53; Column 11, Lines 22-30).

Kaplan does not expressly teach probability bins as claimed.

Sarin teaches defining a center probability bin and defining the probability bins with increasing variances from the center probability bin outward and providing a mean estimate as the center probability bin (Paragraphs 1-2, Page 550; Paragraph 2, Page 552; Table 7) in an analogous art of forecasting for the purpose of predicting/forecasting alternative projections/scenarios (Paragraph 2, Page 544; Paragraph 1, Page 553).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for forecasting as taught by Kaplan would have benefited from defining probability bins having probabilities associated with expected outcomes as well as defining a center probability bin in view of the teachings of Sarin, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claims 5 and 14 Kaplan teaches a method and system wherein the further comprising historical (true, actual, measured, factual, etc.) data associated with the forecasts (probabilities associated with expected outcomes; Column 4, liens 50-53; Column 9, lines 26-34; Column 11, Lines 15-17) for the purpose of comparing participant's forecasted data with actual/true historical data related to the expected outcome.

Kaplan does not expressly teach subdividing data (forecasts, predictions, expected outcomes, etc.) into probability bins as claimed.

Sarin teaches subdividing forecasts/data into probability bins (scenarios, probability distributions; Abstract; Paragraphs 1-2, Page 546; Paragraph 1, Page 547; Last Paragraph, Page 550) in an analogous art of forecasting for the purpose of

predicting/forecasting alternative projections/scenarios (Paragraph 2, Page 544;

Paragraph 1, Page 553).

It would have been obvious to one skilled in the art at the time of the invention

that the system and method for forecasting as taught by Kaplan would have benefited

from defining probability bins (subdividing predictions/forecasts) in view of the teachings

of Sarin; the resultant system/method enabling users to forecast alternative

scenarios/outcomes (Sarin: Paragraph 2, Page 544).

Further since the claimed invention is merely a combination of old elements, and

in the combination each element merely would have performed the same function as it

did separately, and one of ordinary skill in the art would have recognized that the results

of the combination were predictable.

Regarding Claims 8 and 17 Kaplan teaches a method and system wherein the

weighting includes individual participant prediction for the participant and the query

process as a whole (Column 7, Lines 1-25; Column 8, Lines 9-15, 43-60; Column 10,

Lines 12-34; Column 11, Lines 22-26).

While Kaplan teaches that any of a plurality of none weighting schemes could be

used (Column 14, Lines 56-60) Kaplan does not expressly teach utilizing exponential

factoring for the participant characteristic and the query process as a whole as claimed.

Official notice is taken that exponential factoring is an old and well know mathematical/statistical technique, method and/or approach. Common exponential factoring in forecasts include exponential weighted averaging, exponential smoothing factors, MACD (exponential) and the like.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for forecasting as taught by the combination of Kaplan and Sarin would have benefited from utilizing any of a plurality of weighting factors including but not limited to exponential smoothing in view of the teachings of official notice; since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

6.   Claims 6-7 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kaplan, U.S. Patent No. 7,155,510 in view of Sarin, Rakesh K. An Approach for

Long Term Forecasting with an Application to Solar Electric Energy (1979) as applied to

claims 1-6, 8-14 and 17-23 above, and further in view of Pennock et al., The Power of

Play (2001).

        Regarding Claims 6-7 and 15-16 Kaplan teaches providing an web-based

software application to facilitate forecasting (Column 5, Lines 25-40)

        Kaplan does not expressly teach wagering by participants on an expected

outcome as claimed.

        Pennock et al. teach a method and system further comprising wagering (betting)

by the participant on the expected outcome as well as facilitating participant wagering

by providing a web-based software application (HSX, FSX; Paragraphs 2-3, Last

Paragraph, Page 5; Last Paragraph 3, Paragraph 1, Page 4; Last Paragraph, Page 16;

Paragraph 1, Page 17) in an analogous art of forecasting.

        It would have been obvious to one skilled in the art at the time of the invention

that the forecasting system and method as taught by Kaplan would have benefited from

enabling participants to wager/bet on expected outcomes in view of the teachings of

Pennock et al. since the claimed invention is merely a combination of old elements, and

in the combination each element merely would have performed the same function as it

did separately, and one of ordinary skill in the art would have recognized that the results

of the combination were predictable.

7.   Claim is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan,

U.S. Patent No. 7,155,510 in view of Sarin, Rakesh K. An Approach for Long Term

Forecasting with an Application to Solar Electric Energy (1979) as applied to claims 1,

3-6, 8-14 and 17-23 above and further in view of Lundgren, U.S. Patent No. 5,608620.

Regarding Claim 24, Sarin teaches determining and accounting for the accuracy

of participant's input (forecasts; Column 7, Lines 9-26; Column 8, Lines 9-41) however

Sarin does not expressly teach providing rewards to participants as claimed.

Lundren teaches a system and method further comprising: providing a reward

(incentive, compensation, payment, bonus, return, etc.) to the participant based on an

accuracy of the result of the query process as compared to a corresponding actual

asset (Column 1, Lines 64-68; Column 2, Lines 1-22; Column 6, Lines 26-37; Column

20, Lines 9-16; Column 24) in an analogous art of forecasting.

It would have been obvious to one skilled in the art at the time of the invention

that the system and method for finance forecasting as taught by the combination of

Sarin and Kaplan would have benefited from providing rewards/incentives to

participants based on the accuracy of their results in view of the teachings of Lundgren,

since the claimed invention is merely a combination of old elements, and in the

combination each element merely would have performed the same function as it did

separately, and one of ordinary skill in the art would have recognized that the results of

the combination were predictable.

Conclusion

This Office action has an attached requirement for information under 37 C.F.R. § 1.105. A complete response to this Office action must include a complete response to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Forsythe et al., Anatomy of an Experimental Political Stock Market (1992), teaches the well known running of information markets to develop aggregate forecasts of uncertain future events based on the trading of financial instruments by the participants in the information market. Fortsythe et al. further teaches the study of these markets to study the effect of judgment biases (e.g. participant characteristics affect on the prediction).

- Myung et al., Maximum Entropy Aggregation of Expert Opinions (1996), teach a system and method for generating an aggregated probability project associated with an uncertain event by aggregating queries (questions posed to participants about future events) comprising probabilities of future uncertain events obtained wherein the aggregation accounts for personal characteristics of the participants (experts past performance/predictions) as well as the use multiple aggregation functions including exponential factors, and non-linear aggregation.

- Ortner, Forecasting Markets - An Industrial Application (1997), teach a internet-based information market system and method for forecasting uncertain future events wherein participants trade financial instruments.

- Major et al., Aggregating expert predictions in a networked environment (2001), teaches an internet-based system and method for developing a new predictive aggregation formula with adjustments for participants' personal characteristics extracted from participant's behaviors, querying participants for predictions of uncertain events as well as comparing multiple probability aggregation formulas including but not limited to non-linear aggregation techniques.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCOTT L. JARRETT whose telephone number is (571)272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley Bayat can be reached on (571) 272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott L Jarrett/
Primary Examiner, Art Unit 3624